



ATTORNEY DOCKET NO: 0162095-0011

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AUG 18 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TECH CENTER 2700

Applicants: Neil C. Singer, et al.
Application No.: 09/262,781
Filed: March 4, 1999
For: DYNAMIC SYSTEM CONTROL METHOD

Examiner:
Group: 2763

PETITION TO MAKE SPECIAL

The applicant of the above identified patent application hereby petitions to make this application special pursuant to M.P.E.P. § 708.01, subsection VIII. Accompanying this petition is a check for \$130.00 to cover the fees set forth in 37 CFR 1.17(i). Please charge any additional fees to our deposit account number 03-1721. This application has not received any examination by the Examiner.

This petition to make special is with respect to the following pending claims all of which are directed to a single invention. If the Office determines that all of these presented claims are not directed to a single invention, applicant will make an election without traverse as a prerequisite to the grant of special status. The presented claims are claims 148-151, 156, 159-161, 164, 167, and 187-192. Claims 187-192 are new claims presented in a preliminary amendment filed under separate cover (copy enclosed herewith).

These presented claims are directed to technology allowing a user to alter seek time or noise level in a data storage device such as a disk drive. Thus, in a high data throughput application, a user might select the fastest seek times without regard for noise and in, for example, a home theater environment, select a quiet mode while sacrificing some speed. This user-selected trade-off is not known in the prior art. In particular, independent claim 148 is directed to a graphical user interface which provides controllers

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for affecting operation of a data storage device in which the graphical user interface includes a first controller which alters at least one of the seek time of the data storage device and a noise level of the data storage device. Independent claim 161 is directed to a method of controlling operation of a data storage device which involves generating a graphical user interface having controllers for controlling at least the seek time and the noise level of the data storage device. Independent claim 164 is directed to computer-executable process steps stored on a computer-readable medium to provide the trade-off between seek time and noise level. Finally, newly added claims 187-192 are similarly directed to method and apparatus for controlling operation of a data storage device to provide for the trade-off of seek time and noise level in a data storage device. All of these claims are, therefore, directed to the same patentable invention relating to technology providing a user with the ability to trade-off seek time as against acoustics.

Applicant hereby states that a pre-examination search was made by a foreign patent office. In particular, the European Patent Office performed a search and a copy of the International Search Report accompanies this petition along with copies of the five references cited. It is submitted that this international search meets the requirement for a pre-examination search. These cited references will now be discussed.

European patent application No. 0 441 407 A1 teaches a system for positioning a transducer in which acceleration and deceleration profiles are established by minimizing the square of acceleration which serves as a cost function. Target position, target velocity and target acceleration are represented by polynomials which result from the acceleration and deceleration patterns which minimize the integral of the acceleration squared. This reference is devoid of any teaching of providing a user-selected trade-off between

seek time and acoustic noise. Neither page 5 lines 16-56, pointed out by the European Examiner, nor any other portion of this reference discloses the trade-off technology set forth in the claims being presented herein for special status.

US patent no. 5,696,647 discloses various techniques for carrying out seeks in a disk drive to limit acoustic noise arising from changes in acceleration of the actuator. Acoustic noise is suppressed by limiting the acceleration of the actuator which supports the transducer. There is no teaching or suggestion of a system which allows a user to trade-off seek speed for acoustic noise. This reference is strictly limited to design techniques for controlling acoustic noise in a disk drive.

European patent application No. 0 543 654 A2 is directed to a positioning control system for a magnetic head which estimates an arrival time that the controlled device takes from a current position to a designated position and to set the estimated arrival time as a target moving time when the control device is positioned at the designated target position. The positioning control system enables the controlled device such as a magnetic head to be positioned stably and at high speed. This reference does not teach trading of seek speed for acoustic noise selected by a user as set forth in the presented claims. In fact, this patent lacks any discussion whatsoever of acoustic noise in relation to seek time.

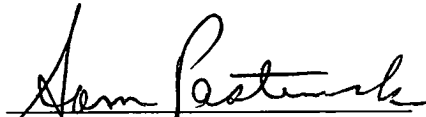
European application No. 0 308 062 is directed to a disk file digital control system that incorporates means for measuring the time between samples of read/write head position error signals and uses a value of that measured time as part of the computation of a digital control signal. The system results in improved performance in moving the head to a target track when there is variation in the nominal position error

signal sampling time caused by variations in the disk file drive motor speed. Again, there is no teaching whatsoever concerning a user-selected trade-off between seek time and acoustic noise.

UK patent application No. GB 2303732A is directed to a head velocity/position estimator. An estimator estimates current head velocity and compares the estimated head velocity with a velocity command. Head movement is controlled based on the difference between the commanded velocity and the estimated head velocity. As with the other references discussed herein, this reference is entirely lacking any teaching of a user being able to adjust seek time in relation to acoustic noise generation which is the subject matter of the claims presented in this petition to make special.

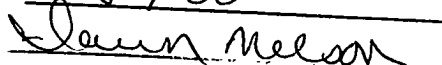
It is submitted that all of the elements set forth in M.P.E.P. §708.02 subsection VIII have now been provided in this petition to make special. It is requested that this petition be granted and that the presented claims be examined as soon as possible.

Respectfully submitted:


Sam Pasternack
Reg. No.: 29,576

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Exchange Place
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(617) 248-5000
August 9, 2000
3152330.1

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner For Patents, Washington, D.C. 20231 on 8-9-00



PATENT COOPERATION TREATY



From the INTERNATIONAL SEARCHING AUTHORITY

To:

Choate, Hall & Stewart
Attn. PYSHER, Paul A.
Exchange Place
53 State Street
Boston, Massachusetts 02109
UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 0162095-0016	Date of mailing (day/month/year) 29/07/1999
International application No. PCT/US 99/ 04910	International filing date (day/month/year) 05/03/1999
Applicant CONVOLVE, INC.	

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Clifford Lekahena

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the International application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 0162095-0011	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 99/ 04910	International filing date (day/month/year) 05/03/1999	(Earliest) Priority Date (day/month/year) 05/03/1998
Applicant CONVOLVE, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

3

☐ None of the figures.

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 696 647 A (PHAN DUC T ET AL) 9 December 1997 (1997-12-09) column 6, line 59 - column 8, line 57 ---	1,6,10, 14,30, 52,60, 62,67, 71,75, 91,113, 120,122, 126,127, 130,138, 145-147
A	EP 0 543 654 A (FUJITSU LTD) 26 May 1993 (1993-05-26) page 4, line 2 - page 5, line 41 page 7, line 33 - page 13, line 25 ---	1,6,10, 14,30, 52,60, 62,67, 71,75, 91,113, 120,122, 126,127, 130,138, 145-147
A	EP 0 308 062 A (IBM) 22 March 1989 (1989-03-22) column 5, line 33 - column 7, line 38 ---	1,6,10, 14,30, 52,60, 62,67, 71,75, 91,113, 120,122, 126,127, 130,138, 145-147
A	GB 2 303 732 A (SAMSUNG ELECTRONICS CO LTD) 26 February 1997 (1997-02-26) page 13, line 38 - page 15, line 21 -----	1,6,10, 14,30, 52,60, 62,67, 71,75, 91,113, 120,122, 126,127, 130,138, 145-147

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0441407	A	14-08-1991	JP 2657561 B	24-09-1997
			JP 3233609 A	17-10-1991
			CA 2036024 A	10-08-1991
			DE 69115944 D	15-02-1996
			DE 69115944 T	19-09-1996
			KR 9309998 B	13-10-1993
			US 5151639 A	29-09-1992

US 5696647	A	09-12-1997	US 5726825 A	10-03-1998
			US 5760992 A	02-06-1998
			US 5751513 A	12-05-1998

EP 0543654	A	26-05-1993	JP 2736715 B	02-04-1998
			JP 5143165 A	11-06-1993
			JP 2736716 B	02-04-1998
			JP 5158543 A	25-06-1993
			DE 69227434 D	03-12-1998
			DE 69227434 T	18-03-1999
			KR 9613213 B	02-10-1996
			US 5469414 A	21-11-1995

EP 0308062	A	22-03-1989	US 4816941 A	28-03-1989
			CA 1317372 A	04-05-1993
			DE 3875439 A	26-11-1992
			JP 1169785 A	05-07-1989
			JP 2111552 C	21-11-1996
			JP 8028072 B	21-03-1996

GB 2303732	A	26-02-1997	DE 19615964 A	30-01-1997

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/15864

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B5/55

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 465 035 A (JOHN A. SCARAMUZZO ET AL) 7 November 1995 (1995-11-07) column 7, line 58 -column 8, line 39; figure 5	1,5
A	US 5 475 545 A (RANDALL D. HAMPSHIRE ET AL) 12 December 1995 (1995-12-12) cited in the application column 6, line 54 -column 7, line 5	1,5
A	WO 90 13113 A (SIEMENS AKTIENGESELLSCHAFT) 1 November 1990 (1990-11-01) page 4, line 15 -page 5, line 7; claim 1	1,5
A	EP 0 717 399 A (NEC CORPORATION) 19 June 1996 (1996-06-19) column 3, line 30 -column 4, line 6	1,5

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

14 October 1999

Date of mailing of the international search report

22/10/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Gerard, E

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/15864

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5465035 A	07-11-1995	NONE	
US 5475545 A	12-12-1995	US 5657179 A	12-08-1997
WO 9013113 A	01-11-1990	EP 0468962 A	05-02-1992
EP 717399 A	19-06-1996	JP 2671841 B	05-11-1997
		JP 8167152 A	25-06-1996
		DE 69504019 D	17-09-1998
		DE 69504019 T	06-05-1999
		US 5566145 A	15-10-1996